DOCUMENT RESUME

ED 034 605 88 RC 003 809

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TITLE Study of the Trends and Developments in Local Labor Markets Relevant to the High School Student.
INSTITUTION Catskill Area School Study Council, Oneonta, N.Y.
SPONS AGENCY Office of Education (DHEW), Washington, D.C. Div. of Plans and Supplementary Centers.
REPORT NO DPSC-67-2749
PUB DATE Sep 69
NOTE 39p.

EDRS PRICE EDRS Price MF-$0.25 HC-$2.05
DESCRIPTORS *Comparative Analysis, *Economic Research, Employment Opportunities, Employment Statistics, Income, *Labor Market, Labor Supply, Manpower Needs, Occupational Guidance, *Occupational Surveys, *Rural Areas, Rural Urban Differences, Vocational Counseling
IDENTIFIERS *New York

ABSTRACT

The rising needs of school teachers and other school-related personnel in acquainting the youth of their region with labor market conditions and operations and in assisting them in planning their work careers were considered in the design of this analysis. The purpose of this report is to provide an economic analysis of the labor market conditions prevailing during most of the 1960's in the area served by Project Probe (a Project for the Advancement of Creativity in Education funded under Title III of the Elementary and Secondary Education Act) in the Catskill region of the State of New York, specifically Chenago, Delaware, and Otsego counties. Comparative analysis utilizing an industrial area of the state, the State of New York, and national figures, examines the major trends in employment and job growth, employment earnings, and major labor market development. Included is a brief discussion of what may be required of the study region's population to fully participate in the benefits of a growing economy which is market oriented. (DK)

AN ESEA TITLE III PROJECT FOR THE ADVANCEMENT OF CREATIVITY IN EDUCATION . . . IN COOPERATION WITH THE CATSKILL AREA SCHOOL STUDY COUNCIL, STATE UNIVERSITY COLLEGE AT ONEONTA, NEW YORK

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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STUDY OF THE TRENDS AND DEVELOPMENTS IN LOCAL LABOR MARKETS RELEVANT TO THE HIGH SCHOOL STUDENT

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PROJECT PROBE

September, 1969

Project PROBE

A Project for the Advancement
of Creativity in Education

PL 89-10 Elementary
and Secondary Education Act

Sponsored by the Oneonta Consolidated School District
In Cooperation with the Catskill Area School Study Council

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The work presented or reported herein was performed pursuant to a Grant from the U.S. Office of Education, Department of Health, Education and Welfare. However, the opinions expressed herein do non necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

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The major purpose of this report is to provide an economic analysis of the labor market conditions prevailing during most of the 1960's in the three counties served by Project PROBE in the Catskill region of the State of New York.[1] However, for the most part, the analysis is of general application to other surrounding counties with similar economic problems. The analysis has been especially designed to meet the rising needs of school teachers and other school-related personnel in acquainting the youth of their region with labor market conditions and operations and in assisting them in planning their work careers.

The report has been divided into an introduction and three major parts. The introduction will discuss the meaning of a labor market and the factors affecting its performance in a predominantly market economy. Part I will examine the major trends in employment and job growth as well as the most significant changes taking place in the employment composition of the study counties. Part II will be an analysis of the major trends in employment earnings with particular reference to the experience and contribution of the major industrial groups. Part III will be tied with the major labor market developments that have recently affected our national economy and that are expected to influence the operation of our labor markets in the foreseeable future. Included here will be a brief discussion of what may be required of the study region's population to fully participate in the benefits of a growing economy which is market oriented.

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[1] They are Chenango, Delaware, and Otsego counties. They will be known in this report as the study counties.

The main approach to be used in presenting the above proposed material is a comparative one. This decision has been largely motivated by the nature of the subject matter. We will attempt to compare employment, employment earnings, and changes in their respective compositions in the study region with those of: a) an industrialized area of the state, b) New York State as a whole, and c) the United States as a whole. We have chosen the Rochester metropolitan area as our industrialized area of the state. With regard to the study region, we should point out that most of the data presented represent an average of two of the counties: Delaware and Otsego. It should also be pointed out that the availability and limitations of the data have dictated, to a significant extent, the kinds of comparisons made in this report.

This kind of comparative approach will serve to determine how the study region has fared with regard to employment and employment earnings, and whether, with respect to the above two variables, the pattern of the region has been similar to that of the state of New York or the nation as a whole.

Introduction

This report is on labor markets and we usually refer to our economy as a market economy; therefore, it is imperative that we begin our presentation by discussing the conceptual meaning of a market, with particular reference in which to make our analysis.

Each society, regardless of its level of economic development and of its political and philosophical affiliation, has to develop

a means of allocating its scarce resources for the satisfaction of the unlimited needs of its population. The market is simply one such means.

We can think of a market as a mechanism through which the wishes of buyers and sellers are communicated to one another for the express purpose of carrying out exchanges; in other words, where the forces of demand and supply meet. Whether this function is performed well or not is a separate issue.

In a free market economy these exchanges are of a voluntary character and good knowledge of the prevailing conditions is assumed on both sides to the transaction. In general, it seems possible to argue that in a free market economy the demand for and supply of a particular commodity determine its price and that changes in demand and/or supply conditions will tend to result in a different price.

The same principle can be extended to the factor market: i.e. labor, capital, etc. This means that, at any particular time, it is the demand for and supply of labor that determine its price. This in no way means that those buying labor will have to pay the same price for different types of labor and levels of skill; however, the market system works in such a way that, in the long run, the only differences in wages that will exist and persist among various types of labor will be those resulting from differences in the cost of training and education -- including here the cost of moving from one job to another and of obtaining the necessary information -- or of variations in the non-monetary aspects of the jobs which conceptually it is possible to translate into money terms for comparative purposes.[2]

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[2]These non-monetary elements of a job are determined subjectively by those making the comparisons. We cannot expect two persons to give the same weight to a given non-monetary element of a job like, for instance, long vacations, or a pension.

In the absence of any legal or practical impediment -- which should not exist in a free market economy -- workers will tend to change jobs if wage differentials, in excess of the above mentioned costs and non-monetary considerations, persist. In doing this, it is argued, workers will tend to eliminate, given sufficient time, any difference in the return to labor that may temporarily develop between different occupations, industries, or regions.[3]

Although ours is, in general, still a market economy and consumers, producers, and factory owners still have some freedom of choice, it is far from free, particularly with respect to labor. In the case of labor we have increasingly recognized the human element in this factor and have turned away from the commodity concept of labor. As a result, wage differentials whether they be occupational, industrial, or regional in nature tend, sometimes, to persist longer than would be possible in a really free market economy. This should not be construed as meaning that labor markets do not work; for example, workers do change occupations, industries, and even regions if the prospects are good. It simply means that this does not occur to the extent that free market theory may lead us to expect, or that sometimes it even occurs in the wrong direction.[4]

The above described lack of complete adjustment is largely the result of imperfections in the market for labor.[5] It can be due to

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[3]We have used the term return to labor rather than wages because the former takes into account those differences in the cost of labor to which reference was made before.

[4]For example, some people may decide to move to an area where wages are higher due to the influence of organized labor, but where jobs may not be available in sufficient numbers for those moving.

[5]These imperfections are not unique to the market for labor.

lack of adequate knowledge about labor market conditions -- this has been found to be more pervasive than most people think. Another important example is the influence of institutional forces like unions, government legislation, or personnel policies among others, many of which are intended as means to alleviate the impersonality of a market economy. But perhaps the most pervasive and least acceptable imperfection affecting the labor market consists of a lack of equality of opportunity, not only in receiving adequate training to enter the job market properly equipped -- given the ability of a person and the level of technological advancement -- but also in not being considered for a job on account of race, religion, etc.

But the above are not the only problems in the efforts of a market economy to equalize the return to labor in various jobs. We should add to them the very dynamic character of our economy. We live in an almost constant state of flux with regard to technology. For the most part, technological changes result in relative changes in the demand for and supply of, not only labor in general, but also of specific types of labor.[6] Even if we did not have to worry about imperfections in the labor market and could confidently hope that the wage differentials caused by technological changes would disappear over the long run, this almost constant state of flux would seldom permit a complete adjustment to be attained and if attained, to last for any length of time. For example, by the time that supply conditions begin to adjust to the new state of demand, we may experience a new change; possibly in the same direction, but not infrequently in the opposite direction. Therefore, our problems are compounded,

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[6]The demand for skilled labor may increase relative to the demand for unskilled labor or vice versa.

because of the dislocations caused by technological progress, we have to add the very real market imperfections.

An illustration will serve to make clear our previous analysis. Let us suppose that due to the development of new methods of teaching, the demand in the Northeast of the United States for teachers of a particular specialty, say economics, decreases but that as a result of new discoveries in space technology the demand for teachers of cosmotechnology increases. Furthermore, lets suppose that some of the newly displaced teachers are willing to be retrained so that they can fill the newly created teaching positions in cosmotechnology. It is possible that by the time they have completed their retraining, a new development in teaching methods will have occurred, eliminating some of the recently created jobs in cosmotechnology. On the other hand, it is also possible that the demand for teachers of economics and/or cosmotechnology in another part may be increasing relative to their respective supply, or else that the skill of those displaced teachers could be used in other fields (i.e. selling equipment to schools or serving as consultants for those firms developing the new teaching methods, etc.). However, lack of knowledge on the part of those involved might preclude them from adjusting to the new market situation. Another possibility is that of a teachers' union in the Northeast managing to enforce rules whereby teachers cannot be displaced even when their jobs have become redundant even though other parts of the country might welcome the opportunity to hire those teachers. Or even worse, their re-employment may be prevented on account of their race, religion, or sex. Here we have, in a nutshell, some of the factors that can render a market far from free and unable to perform its function properly.

There is no need to elaborate on the fact that the study counties are relatively poor by the standards of the American economy. A look at the following figures should suffice:

Table I

Per Capita Personal Income
(in current dollars)

	Study Counties	Monroe County	New York State	United States
1960	$1,865	$2,727	$2,746	$2,219
1966	2,420	3,752	3,497	2,980
1966/1960	1.29	1.30	1.27	1.33

Source: Statistical Abstract of the United States, United States Bureau of the Census, Washington, D.C. 1968

However, the above discussion can very well help explain the persistence of lower average incomes in the study counties after agriculture -- which had been for years the main source of employment in the study counties -- became a declining industry with respect to employment. The per capita personal income of the three counties combined was only about 80% of the per capita personal income of the whole nation in 1960. By 1966 the situation had not changed to any appreciable extent. A similar situation is found when the per capita personal income of the study counties is compared with that of the State of New York or with that of a highly industrialized county within the latter (Monroe County). The fact of the matter is that in the latter instance, the income gap has widened over the years. It is true that the per capita personal income of the study counties grew by almost 30% over the six-year period (1960-66), but so did the per capita personal income of the nation as a whole, or of New York State, or of the most highly industrialized areas of the state; therefore, the income gap has not been closed.

During all this time, the labor market was indeed working and trying to allocate resources in the best possible way; for example, workers were moving to new jobs, industries, and even regions, but the labor market was plagued with the kind of imperfections discussed earlier in this section. Furthermore, things were complicated by the rising tempo of technological progress. Therefore, the efficiency of the labor market was somewhat impaired. On the bright side, the study counties were able to hold their relative position and it did not seriously deteriorate.

Part I Recent Developments in Employment

In this section, we are chiefly concerned with the job side of the labor market. We will explore, not only changes in employment, but also labor availability. The latter is relevant in determining the strength of the labor market in creating enough jobs for those willing and able to work at prevailing wage rates.

With regard to changes in labor availability, the evidence here examined is only suggestive due to the dearth and limitations of the available data.

One of the most important determinants of the number of people available for employment is the size of the population. If the population increases we can expect that the labor supply will also increase.

The study counties have been predominantly rural in character, as the following figures attest:

Table II

Percentage of the Total Population
Living in Urban Areas
(1960)

New York State	85.4%
Chenango County	21.2%
Delaware County	20.7%
Otsego County	30.7%

Source: United States Census of Population, Bureau of the Census, Washington, D.C. 1960

This is important because most rural communities in the United States have been losing population due to the decline of farming as a source of employment.

Table III

Changes in Population

	1950-60			1960-65
	Total	Net Migration	National Increase	National Increase
New York State	13.2%	1.4%	11.7%	5.2%
Chenango County	10.5%	1.3%	11.8%	5.8%
Delaware County	2.0%	11.1%	9.1%	4.2%
Otsego County	2.3%	5.0%	7.3%	2.8%

Source: City and County Data Book, United States Bureau of the Census, Washington, D.C. 1967

The above figures suggest that between 1950 and 1960 the study counties, as a group, experienced an increase in population that was relatively modest to that of the state as a whole. This figure for increase in population was the net result of some rather heavy net outmigration, particularly in Delaware County, which was more than offset by natural increases in population. The outmigration from the farms was somewhat greater than that for the three counties as a whole, because some internal migration to the urbanized areas of the

three counties took place. This goes a long way towards demonstrating that our labor markets do work, although not perfectly.

It is also important to note that there was some influx of highly skilled manpower which was more than offset, numerically speaking, by the outmigration of low skilled labor, which on the average, probably had a positive effect on the quality of the labor force in the study counties. This suggestion is based on the experience of most other regions with a similar economic structure.

For the 1960-65 period, it was possible to obtain data only on natural increases in population; this continued at approximately the same pace as during the 1950's. As for net migration, there is a strong indication that the pattern of the 1950's continued here, too, and that the region lost some population on this account. We can suggest that during the 1960's the net effect of population changes has been to add somewhat to the labor supply of the three counties, although probably only by a modest amount.

A second factor of significance affecting the size of the labor supply is labor force participation.[7] Between 1950 and 1960, the labor force participation rate of males in New York State did not change in urban areas, but it increased in rural farm areas and suffered a very slight decline in rural non-farm areas. On the other hand, the labor force participation rate of females was rising very rapidly, regardless of type of residence, as the figures below show. This was particularly true of females residing in rural areas.

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[7] By labor force participation we usually mean the proportion of the population fourteen years of age and over, who are working or actively seeking employment.

Table IV

Labor Force Participation Rates (population 14 years of age and over) in the State of New York by Type of Residence

	Males		Females	
	1950	1960	1950	1960
Urban	78.7	78.5	33.6	37.8
Rural Farm	70.6	74.8	24.5	31.5
Rural Non-farm	82.8	81.9	19.8	29.2

Source: United States Census of Population, Bureau of Census, Washington, D.C. 1950 and 1960

The above has simply been part of a trend that has affected the entire nation over the past few decades, and which particularly in the case of females, seems to have continued during the 1960's. Although we cannot in this report estimate the contribution of this factor to the labor supply of the study counties during the 1960's, we can work under the assumption that it resulted in some increase in the total number of people available for employment, particularly females.

It can be suggested then, that the non-agricultural sector of the economy was expected to provide more jobs, not only to absorb those being displaced in the agricultural sector of the economy, but also to absorb the new entrants due to a relatively modest increase in population plus an increase in labor force participation, particularly of females:

Table V

Change in Total Non-farm Employment
by Major Industrial Groups
(1960-67)

	Delaware Co. Otsego Co.	Rochester Metro. Area	New York State	United States
All Non-farm	10%	43%	8%	22%
Manufacturing	7%	38%	-1%	16%
Finance, Insurance-Real Estate	14%	35%	13%	21%
Wholesale-Retail	10%	48%	11%	20%
Service	13%	63%	26%	36%

Source: Employment Statistics, New York State Department of Labor, Albany, New York 1969. Employment and Earnings Statistics, United States Department of Labor, Washington, D.C. 1968

Let us now examine the extent to which new jobs were created in the study counties. As the above figures suggest, there was some growth in employment opportunities outside farming over the 1960-67 period. The relative growth of employment was somewhat greater in the study counties than it was in the state as a whole. It fell short, by a considerable amount, of the relative growth of employment in the industrialized area of the state used in this report for comparative purposes and the nation as a whole. It should be remembered that the study region had not had a rapidly rising population.

The above figures also show that the largest relative contribution to the total non-farm employment of the study counties came from the Finance-Insurance-Real Estate group and the Service Industries, with the Wholesale-Retail group providing a third important source of new jobs. In absolute terms the manufacturing sector provided the single largest source of new jobs because, although its employment expansion was below average, it represents close to half of all the non-farm jobs in the economy of the study counties. (See Table VI)

Although no comparable data were found with regard to government employment, this sector has also been expanding at all levels (local, state, and federal) in the study counties. This is important because as the demand for government services continues to rise, this sector can be expected to become a significant source of new employment. At present, the author has estimated that this sector provides as much as between 1/5 and 1/6 of all the non-farm jobs in the study counties.[8]

It is significant to note that the above pattern of non-farm employment expansion is by no means, unique to the study counties. As may be seen from the above figures, it differs only in degree from that of the rest of the state or from that of the whole country.

Table VI

Changes in the Relative Distribution of Non-agricultural Jobs by Major Industrial Groups

	Delaware & Otsego		Rochester Metro. Area		New York State		United States	
	1960	1967	1960	1967	1960	1967	1960	1967
All Industries	100%	100%	100%	100%	100%	100%	100%	100%
Contract Constr.	4%	5%	5%	6%	5%	4%	5%	5%
Manufacturing	48%	47%	57%	55%	38%	35%	31%	29%
Transportation & Public Utilities	6%	6%	4%	4%	8%	8%	7%	7%
Wholesale-Retail	27%	28%	21%	23%	25%	26%	21%	21%
Finance, Insurance & Real Estate	4%	5%	4%	5%	9%	10%	5%	5%
Service	9%	10%	7%	8%	12%	15%	14%	15%

Note: Columns do not add to 100% because not all the ratios are given here.

Source: See Table V

[8]The estimate is based on an analysis of several different pieces of evidence.

The above figures indicate how, despite the rather short period of time being considered (1960-67), the distribution of non-farm employment has started to show signs of the previously noted differences in the rate of growth of employment among the major industrial sectors. But the figures also show that the two most rapidly expanding sectors, as far as employment is concerned, (with the exception of government) are relatively more important as a source of employment at the state and national levels than they are in the study counties.[9] As we will discuss later, this is an important point to bear in mind when giving orientation to our youth with respect to their job career.

It is relevant now to examine in somewhat greater detail the manufacturing sector. This has been deemed necessary in view of the great importance that leaders in most rural-agricultural areas place on the growth of this sector in providing new employment to replace the declining employment.

In the first place, it can be noted from the above figures on the distribution of non-farm employment that manufacturing is responsible for slightly less than half of all the non-farm jobs in the study counties. For a region that is just going through the transition from a rural-agricultural, socio-economic structure to a non-agricultural-urban structure, this can be interpreted as a rather good sign, at least in the short run, since the manufacturing sector is providing a quick source of employment for many of those who are being displaced. Furthermore, the manufacturing payroll is helping to support and even expand employment in other sectors of the non-farm economy. (e.g. local business)

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[9] As noted earlier, the two sectors are: Service Industries and Finance-Insurance-Real Estate Sector.

Table VI also shows how the relative importance of the manufacturing sector as a source of employment in the non-farm economy is much higher in the study counties than it is in the state or the nation as a whole. On the other hand, it is less than in the most industrialized parts of the state: i.e. Rochester. Regardless of the political unit chosen, the relative importance of the manufacturing sector as a source of employment is declining; but, as a stop gap measure in an economy undergoing rapid transition, the manufacturing sector seems to have played an important role. In a way, the study counties have thus been able to buy some time in which to do something about the ailments caused by this rapid transition.

With regard to the composition of the manufacturing sector, it is significant to point out that there is rather heavy concentration in a few sub-sectors. These are usually those which can make relatively greater use of low skilled workers since the kind of labor being displaced in the agricultural sector is, for the most part, low skilled. Among these sub-sectors we find: food processing, garment, plastics, and a few electronic component plants. These are, in general, highly mobile sub-sectors of the manufacturing sector, with relatively low capital requirements and which can either serve the needs of a rural-agricultural economy or use its resources, including here the displaced labor. As could be expected from the above description, most of them employ less than 100 workers. In the correction, it should be borne in mind that rural areas tend to be sparsely populated which makes some what more difficult the establishment of large plants. Only recently have some significant parts of the study counties started to become urbanized with a consequent increase in population concentration.

It should be pointed out that the sub-sectors discussed above are not, with a very few exceptions, among the fast growing manufacturing sub-sectors of the nation. The latter tend to include many of the durable good industries which are the ones increasingly called upon to meet the demands of a more affluent kind of society, as well as the producers' durables which are needed to produce them.

The manufacturing groups expanding employment most in the study counties are also among those which, on the average, pay lower wages at the national level. This shows in the earnings of the workers involved, independent of the demand and supply conditions for labor in the area. This reflects the influence of the institutional forces to which reference was made earlier in the report.

We would like to add that the manufacturing sector has provided jobs not only for men, but also for women.[10] This appears to have facilitated the entry or re-entry of many women into the labor force. In addition, this has served to supplement the income of many farm families which in turn has resulted in some upgrading of their standard of living.

In closing this section, we should look into the matter of whether enough jobs were created for those willing and able to work. This is likely to be one of the most difficult questions that can be asked of labor economists. In a report of this nature, we can only attempt to offer a general view of the problem.

To begin with, we are not taking into account those who following the dictates of the market mechanism, left the area. We saw earlier they were quite a few in number. We are concerned here with

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[10]See the Industrial Directory of the New York Electric and Gas Company.

those who apparently continued their residence in the area.[11] As was seen earlier, jobs had to be created, not only for those displaced from farming, but also for the net increase in the work force, due either to natural increases in population or to higher labor force participation rates.

One of the most widely used measures for this purpose is the unemployment rate. Based only on outright unemployment for the region, we note that the increase in the number of jobs has been approximately sufficient to meet the increase in labor supply and the displacement from agriculture (adjusted for migration) during the 1960's. This does not mean that the study region could not accommodate some further increase in new jobs. Nor should this be confused with the issue of whether the jobs created were those which could maximize the use of the skill mix of those available for work in the study region.

In partial support of the above position we can cite the reports of the manpower administration where areas are classified according to their labor availability for procurement purposes under government programs to alleviate unemployment and poverty. The following are the groups:

Group		Unemployment Rate
A	Overall Labor Shortage	less than 1.5%
B	Low Unemployment	1.5 to 2.9
C	Modest Unemployment	3.0 to 5.9
D	Substantial Unemployment	6.0 to 8.9
E	Substantial Unemployment	9.0 to 11.9
F	Substantial Unemployment	12 or more

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[11] We should point out that these are not quite unrelated events. As workers start to leave a region, the chance of finding better jobs for those remaining behind may very well improve.

In this respect, none of the study counties was found in January, 1969, to be an area of concentrated employment or underemployment. However, it seems important to point out that there were some neighboring areas which were so classified.[12]

But statistics do not always reveal the real magnitude of unemployment in a given region, for example, they do not show the extent of disguised unemployment. For the most part, unemployment figures are, regardless of the level of economic activity, lower in rural-agricultural areas than they are in urbanized ones. The following figures may help in illustrating the above point:

Table VII

Unemployment Rates by Types of Residence in the State of New York

	Male		Female	
	1950	1960	1950	1960
Urban	5.3	4.8	1.7	5.4
Rural Non-farm	3.8	6.3	1.2	6.9
Rural Farm	2.2	3.0	0.9	5.3

Source: United States Census of Population, United States Bureau of the Census, Washington, D.C.

The above figures show that, in both years, the unemployment rate was lowest in rural-farm areas. In the author's experience, the above finding applies as well to other rural parts of America. In large measure, this is due to the particular organization of agriculture in the United States, in which the family farm is the cornerstone of family organization in most rural areas, with a tendency to distribute what work is available among the members of the family. When there

[12] Moreover, small pockets of unemployment have developed at times within the study region.

is not enough work to keep everyone fully occupied, the result is underemployment for most members of the family. Some members of the family, for example, the wife or the daughter, may result in partial or complete withdrawal from the work force. Although no direct evidence can be offered, the fact that in the study counties only some 4 or 5% of all farms are operated by tenants can be used as an indication that most farmers are the owners of their farm. When employment opportunities in farming decline, it is not possible for them to lay off either themselves or their family.[13]

The fact that between 40 and 44% of all farms in the study counties had sales of produce amounting to less than $10,000 could suggest the presence of some underemployment, too, since this may represent a relatively low return to labor in farming.

The lower labor force participation rate of females in rural-farming areas could also be used as indirect evidence that the fact that women in rural areas have experienced relatively the fastest growth in labor force participation. This might well indicate that as new jobs were created in those areas, many women returned to regular employment and that their relatively low labor force participation was, in part, the reflection of a lack of employment opportunities.[14]

Furthermore, the United States Bureau of Labor Statistics has

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[13] In the case of workers in rural non-farm areas, in 1960 the unemployment rates were found to be above average. This could be the result of a combination of two factors. First, many of them were no longer part of the traditional farm organization. Second, the economy was at a rather low level of activity and the rural non-farm areas apparently were not able to generate sufficient job opportunities for those wanting to work outside farming.

[14] This should not be construed as arguing that the above is the only factor causing the rise in female labor force participation that has been taking place in the United States.

found some decline in the labor force participation of men between 45 and 59 years old. This could be indicative of disguised unemployment through early retirement which was, then, a substitute for unemployment. It is true, that given our present degree of economic development, many of them were actually unemployables due to an unfortunate combination of old age and lack of adequate education and skill. Nevertheless, given an opportunity some may welcome a job. In support of this, the United States Bureau of Labor Statistics found that the 1962-65 decline in labor force participation among men age 55-64 was almost entirely limited to those with the lowest educational attainment. They are also among the least mobile labor groups in our economy and, as a result, the migration mechanism of the labor market is of little use.

Another source of hidden unemployment is part-time employment. We are not referring here to voluntary part-time employment but to the one caused by economic reasons. The service industries is one of the sectors of our economy that has offered some refuge to many of those working part-time for economic reasons on a rather permanent basis. This sector can employ a considerable number of low skilled workers and, as a result, in rural areas it has attracted some of those persons displaced from agriculture or related activities, particularly women. The author found some evidence that in 1964 there were in the study counties many farm operators off their farms for quite a few days during the year. Also, there were some people working part-time on and part-time off the farm. However, we cannot definitely state that they were working part-time on an involuntary permanent basis, but, it does show that there may be some unemployment of this kind occurring in the study counties.

We should make it clear that we do not pretend to know exactly the extent to which all the sources of hidden unemployment mentioned here have been present in the study counties during the 1960's. We do want to suggest that some of them may have been present. To the extent that this is true, figures on outright employment do not reflect the real extent of unemployment in the study counties.

Until our measurement devices can be perfected, we should say that the available evidence strongly suggests that the jobs created outside the agricultural section appear to have been fairly adequate to meet the rising needs for new non-farm jobs in the study counties. Although the area could still benefit from some further growth in employment since from time to time small pockets of unemployment have developed with its boundaries.

Part II Recent Developments in Employment Earnings

The two sides to the analysis of labor markets are jobs and wages. In this section, we will examine the latter. Rather than just rates, we will consider total employment. First, the available evidence is usually cast in terms of earnings. Second, most workers are more concerned with earnings than they are with wages since it is the former that influences their standard of living.

The analysis of employment earnings will also provide a meaningful explanation for the relative level of income of the study region. Although earnings from employment are by no means the only form of income, they are by far the largest single component of income in the United States. If the level of employment earnings of a particular region is low, so will, in most cases, be its level of income. Low earnings and low income tend to go hand in hand.

The growth in average weekly earnings of all industries in Delaware and Otsego Counties during the 1960-67 period does not compare unfavorably with the other areas considered as can be seen from Table VIII. It was slightly greater than for Rochester, New York State, and particularly the United States as a whole. We should bear in mind that in dollars and cents the differential failed to narrow, because average weekly earnings were much lower in the study counties. A few percentage points differential in average growth will not necessarily result in reduction of the dollars and cents differential. On the other hand, at least the study counties did not fall behind during the period under consideration. This is particularly true when the study counties are contrasted with the United States as a whole.

Table VIII

Growth in Average Weekly Earnings
(1960-67)

	Delaware & Otsego	Rochester Metro. Area	New York State	United States
All Industries	31%	28%	29%	26%
Manufacturing	30%	30%	31%	28%
Finance, Insurance-Real Estate	31%	35%	39%	27%
Services	39%	27%	28%	n.a.
Wholesale-Retail	24%	22%	24%	24%

Source: See Table V

Table IX

Average Weekly Earnings for all Industries

	1960	1967	Change
Delaware - Otsego County	$ 76.27	$100.30	$24.03
Rochester Metropolitan Area	106.42	136.87	30.45
New York State	102.40	132.21	29.81
United States	80.67	101.84	21.17

Source: See Table V

In the study counties, the sector that contributed most to the above mentioned growth in employment earnings during the 1960-67 period was the service sector. The finance-insurance-real estate and the manufacturing sectors provided the second most important source of growth.

At this point, it seems appropriate to advance two tentative explanations for the relatively greater contribution of the service industries to the total growth of employment earnings of the study counties.

First, some of the service industries were brought for the first time under federal minimum wage legislation. Many workers in this sector had been receiving just the statutory minimum wage and during the period under consideration, the statutory minimum wage was increased more than once. This represents an institutional influence as opposed to a labor market influence.

The second possible explanation, which is not incompatible with the above one, but rather complements it, is a labor market influence. The demand for services in the United States has been growing relatively faster than the demand for manufactured goods over the last two decades, particularly the demand for personal services. The service industries are on the average, relatively more labor intensive than manufacturing industries are. Therefore, it is conceivable that the demand for labor in this sector was very strong throughout the period of analysis. In partial support of this view, it was seen earlier how this sector had an above average rate of growth with regard to new jobs in the study counties during that same period. On the supply side since demand alone cannot determine earnings, we have to take into account that some workers are not able to find employment in agriculture and cannot be easily absorbed by some of the service industries

due to important differences in skill requirements between the two sectors. Therefore, it is possible that some labor market pressure may have resulted in higher than average gains in earnings in this sector.

When we contrast the two counties to the Rochester Metropolitan area, the state as a whole, or the nation as a whole, we find that although the pattern of relative growth in weekly earnings was not exactly the same, it was rather similar. In all cases, it was either the service industries or the finance-insurance-real estate sector which gained the most. In all instances, manufacturing exhibited an average gain in average weekly earnings and the wholesale-retail sector a below average one. The pattern of growth in average weekly earnings of the study counties was rather similar to that of the state and/or the nation as a whole.

Table X

Average Weekly Earnings by Sector as a Percentage of the Average Weekly Earnings for All Industries

	Delaware & Otsego		Rochester Metro. Area		New York State		United States	
	1960	1967	1960	1967	1960	1967	1960	1967
Manufacturing	107%	107%	114%	115%	105%	107%	111%	112%
Finance, Insurance-Real Estate	93%	93%	86%	91%	98%	105%	93%	94%
Services	60%	64%	63%	64%	86%	87%	na	na
Wholesale-Retail	84%	80%	73%	69%	90%	86%	80%	81%

Source: See Table V

With regard to how average weekly earnings in one industrial sector compare to the average of all industries, the figures in the above table indicate that when an industrial sector shows below average weekly earnings in the study counties, it also shows below average weekly earnings in the Rochester Metropolitan area, the State of New York, and the nation as a whole.

Table X shows that the wholesale-retail sector is at the lowest end of the employment earnings spectrum, whereas manufacturing is at the opposite end. Differences within a sector from one geographic unit to another probably reflect variations in the composition of the sector -- for example, in manufacturing durable goods as opposed to non-durable ones -- but the relative position is in all cases the same.

For the study counties in particular, it is fortunate that manufacturing is relatively a high pay sector since this is the sector that, for the most part, has replaced farming as a source of livelihood. As was seen earlier, it was the single largest source of employment outside farming.

Table XI shows that the average hourly earnings in the study counties are below the average for the nation as a whole, regardless of the industrial sector that we choose.[15] Those of the Rochester Metropolitan area and New York State are above average.

Table XI

Average Hourly Earnings as a Percentage of Average Hourly Earnings for the United States by Industrial Sector

Manufacturing	1960	1967
Delaware-Otsego County	92%	94%
Rochester Metropolitan Area	136%	138%
New York State	120%	123%
Finance-Insurance-Real Estate		
Delaware-Otsego County	95%	98%
Rochester Metropolitan Area	123%	130%
New York State	134%	147%
Wholesale-Retail		
Delaware-Otsego County	97%	101%
Rochester Metropolitan Area	117%	115%
New York State	139%	139%

Source: See Table V

[15] By 1967, the wholesale-retail sector were almost the same.

This is very significant because, as we pointed out earlier, employment earnings is the single most important component of total income. This helps explain why the income of the region is lower than the income of the state and/or of the nation as a whole.

It is our contention that the below average employment earnings of the study counties should not be construed as meaning that the labor market has not done a reasonably good job, given the institutional forces affecting its free functioning.[16] They simply reflect the relatively lower quality of the labor resources available in the study region. To improve the quality of these labor resources is a lengthy process and being aware of this limitation is better than being overly optimistic. It is also our contention that the market mechanism has to be aided and that it cannot be relied upon entirely to close the income gap with the most prosperous parts of the state and/or of the nation.

Part III The Outlook

When we analyze past and current trends we deal with phenomena that have already taken place or that are just occurring. This task, though difficult, is not nearly as difficult as attempting to look into the future. Here, we are on ground that is much less safe.

Our economy is too complex, things are happening too swiftly, new trends are oftentimes superceded or even reversed long before they can run their course. For one thing, we are not always quite sure in which direction we are actually moving. We have many challenges ahead

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[16]This point was discussed extensively earlier in the report.

of us and we should be ready to confront them. But how, if we are not quite certain about their form and full meaning? Despite all these difficulties, we will attempt to give our own interpretation of the possible problems likely to be encountered.

We have said before that, as far as the statistics show, the study counties do not have a significant amount of outright unemployment, although they may have an indeterminate amount of hidden unemployment. We have also shown that employment earnings in the study region are very low. It seems that we are talking about poverty among employed people for the most part. This sounds like heresy or at least a contradiction.

First of all, we should point out that poverty is a relative as well as an absolute concept. In the former sense, poverty has always existed and will always exist. It is with this relative concept that most families in the United States are concerned and we think rightly so. They know that to maintain a minimum standard of decency a family of four needs an annual budget of approximately $7,500 in metropolitan areas and $6,500 in non-metropolitan areas during the early part of the 1960's.[17] It is interesting to note that in 1960 about 50% of all families living in the study region had incomes of less than $5,000. This compares very unfavorably with the corresponding figure for the state as a whole which was 32% and for the Rochester Metropolitan area which was 24%

The United States Bureau of Labor Statistics has estimated that in 1965 there were in the United States over 5 million men and women who worked full-time and made $2,500 or less, of whom about one-half were wage and salary workers. Most of the remainder were self-employed

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[17]These figures are subject to some variation depending on what standards are used, but they have been generally accepted as quite realistic.

people mainly in agriculture. They also reported some 2 million persons working part-time for economic reasons -- who for the most part were close to poverty. Finally, they found that some 5% of all employed persons in the United States held more than one job.[18] This is relevant because the evidence of multiple job holding (moonlighting) among low income earners was quite heavy. This represents a considerable number of people who want to work, but whose skills and level of education do not permit them to earn enough money to get them out of poverty. If they manage to stay out of poverty, it is not by a comfortable margin, and oftentimes, not for long.

This is relevant to our analysis because we saw earlier that, for the most part, unemployment was relatively low in the study counties. Even at high levels of economic activity the ghost of poverty was haunting many of those residing in the study counties, even though they were willing to work and work hard.

With the above in mind let us proceed to explore what has been projected in the demand for labor in the United States during the 1962-70 period, a trend which is expected to continue throughout the 1970's. This should be of interest to everyone in the region of study, but particularly to the youth of the region if they do not want to fall behind.

According to a report by the United States Bureau of Labor Statistics, between 1962 and 1970 there will be a change in aggregate

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[18] Low Earners and Their Income, Special Labor Force Report No. 82, 1967. Multiple Jobholders in May 1965, Special Labor Force Report No. 90, 1967. Adult Men Not in the Labor Force, Special Labor Force Report No. 79, 1967. Short Workweeks and Underdevelopment, Special Labor Force Report No. 196. United States Department of Labor, Washington, D.C.

employment of 13.5%.[19] If no change was to occur in labor productivity or in the relation of capital to labor during the above period, the increase would be 36.5% as a result of increases in the demand for goods and services. If the latter were the case, there would be nothing to worry about from the point of view of finding jobs for those willing to work, but a 23.2% increase in labor productivity and a 0.2% decline in the unit labor requirements is anticipated. These two factors working against the employment of more labor means that the demand for labor is likely to rise by only 13.5% instead of by 36.5%. This may help to illustrate how the rapid changes sweeping our economy tend to affect the labor market and put a tremendous amount of pressure on its delicate mechanism.

This means too that, were the above trend to continue, as may very well be the case, more than one-half of the future increases in the demand for goods and services will be met by a combination of higher labor productivity and production methods requiring relatively less labor.[20] There is possibly one good sign in that the three sectors providing most of the gains in employment (and which are expected to continue doing so) are the services industries, the trade sector and the government. They have been affected to a somewhat lesser extent by rapid technological changes due to the nature of many of the services performed by them.

It should be pointed out that regardless of sector, the demand for those possessing a relatively high level of skill and/or education

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[19] R. E. Kutscher and E. R. Jacobs, "Factors Affecting Changes in Employment," Monthly Labor Review, United States Department of Labor, Washington D.C. 1967.

[20] The above two phenomena are not unrelated to each other.

is on the rise. Furthermore, within each one of our economic sectors, white-collar and technical employment is rising relative to production employment. This is particularly true and significant of manufacturing, transportation, and communications and public utilities which traditionally have employed large numbers of production workers.

The above suggests a general upgrading of our manpower requirements which might prove to be of an unprecedented magnitude and which calls for a corresponding upgrading on the part of our available manpower. In this connection, the United States Bureau of Labor Statistics has projected the following average increase in the level of education of our labor force:

Table XII

Percentage Distribution of the Civilian Labor Force (25 years of age and over) by Years of School Completed

	1957-59	1964-66	1975 (a)
Elementary			
8 Years or Less	34.5	26.2	16.0
High School			
1 to 3 Years	19.2	18.9	17.9
4 Years	27.8	32.8	39.5
College			
1 to 3 Years	8.4	9.6	11.1
4 Years	10.2	12.5	15.4
Median			
(a) Estimate	11.4	12.2	12.4

Source: "Education of Adult Workers in 1975," Monthly Labor Review, D. F. Johnston, United States Department of Labor, Washington, D.C. 1968

Table XII conceals one important fact. The quality of education has been going up and this is expected to continue in the foreseeable future. This means that we will have a labor force which, on

the average, will have not only more schooling, but also a better quality education.

What does all this mean for the people in the study counties? It means that it will take a lot of work just to maintain the present relative position, and a more concerted effort to close the income gap with the most advanced areas of the state and/or with the nation as a whole.

The jobs that will probably be available will tend to require a higher level of skill and formal education on the part of the workers. The population all over the country will, on the average, be better prepared. We have a real challenge ahead of us which calls for lots of imagination, good will, understanding, and above all, determination, if the people of the study counties want to share in the growth of the American economy and refuse to be left behind.

This is a more difficult task than may at first be apparent, because our education system and most of the programs available for the upgrading of our labor force, in general, call for some sort of local financing, even if only partial. Whether we owe that much to our youth and to those who want to work, but whose skills and education have forced them to live in poverty, and whether we want to prevent more political and economic centralization are issues which we do not pretend to answer in this report. Those residing in the study counties will have to make this decision sooner or later.

If the study counties do indeed have poverty amid the almost full employment of their labor resources, there is no long-run substitute for a general upgrading of their labor force, preferably at a relatively faster rate than that of the state and the nation as a whole. Since this is a lenghty process, it does not preclude the use of short-run measures which may help to improve the relative position of the

study counties. For example, some outmigration of unskilled labor. The availability of more skilled labor may attract relatively higher paying industries, this will result not only in higher earnings for the region, but also in the possible employment at relatively higher than average earnings of those unskilled workers who stay in the region.[21] Unfortunately, this solution is not always feasible due to the imperfections of the labor market which were discussed earlier in the report. Sometimes it is the skilled worker who outmigrates and the unskilled one who stays behind. In this regard, additional detailed research is needed badly.

With regard to the long-run, the designing of education programs to meet the manpower needs of the 1970's and 1980's is perhaps the most difficult task confronting our educators today. This is a particularly challenging job for the educators of the study counties and other areas facing similar problems. Economists, particularly labor economists, can examine and analyze labor market trends and developments, but it remains the responsibility of our educators to see that our educational programs can meet the new needs of a rapidly changing economy.

This is important for everyone in the labor force, but particularly so for our youth. For example, the United States Bureau of Labor Statistics has reported that of those persons between the ages of 16 and 20 who were studied two years after leaving school, those with relatively more education were found to have made relatively greater advances.[22] High school graduates did much better than high school dropouts.

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[21] In many instances, the employment of skilled and unskilled labor is complementary.

[22] Out-of-School Youth Two Years Later, Special Labor Force Report No. 71, United States Department of Labor, Washington, D.C. 1968

This was true regardless of the level of economic conditions in the nation. It was also true regardless of the measure used, for example:

Unemployment Rates
Earnings
Steadiness of Employment

It is interesting to note that many of the dropouts returned to school. It is increasingly important to find out why some of our youth drop out of school and what can be done to encourage them to stay in school. It is necessary to plan programs suitable for them. The development of new curricula to meet the particular needs of these children is needed urgently. Many of the problems leading to later dropouts start to develop at the elementary school level and preventive policies could be applied at this early stage.

More attention has been given lately to the possibility of improving our apprenticeship programs, and particularly to their integration with our educational system. Of interest here, is the possibility of allowing our youth to enter apprenticeship programs while still in school. It is likely that many of our good paying jobs will increasingly require extensive apprenticeship training, including many for which women have been found attractive. This is an area that for years has been largely neglected.

Automation, one of our greatest challenges, is only a specialized form of technology. It is expected to affect all aspects of our life including communications, the use of new instruments, transportation, new techniques of management, etc. As a result, the function of the factory operator is rapidly changing. Approximately 350 occupations in the United States require apprenticeship programs. Europeans, for whom these programs have been of vital importance over the recent past have developed methods, not only of bringing youth into such programs, but also of instituting accelerated methods to retrain

older workers.

The following are some of the areas where they are needed in the United States and for which a good solid education is a prerequisite:

Aircraft Mechanics
Appliance Servicemen
Automobile Mechanics
Business Machines Servicemen
Tool and Die Makers
Dispensing Opticians and Optical Mechanics

Automation will not necessarily eliminate them, at least in the foreseeable future, but workers will simply need to be equipped with more education to enter these trades.

The people of the study counties should be prepared to take any opportunity available to retrain and upgrade their labor force through programs such as those authorized under the Manpower Development and Training Act. The record of retrained workers who were formerly low-educated-low earnings workers has been rather good. Such programs can also encourage the migration of many of those who cannot be employed in the region. It should be pointed out that the Congress of the United States is more or less committed to the idea of manpower development as some sort of permanent feature of our economy. Such programs will probably increase in number and quality. The State of New York has given some indications that they are interested in the development of such programs.

The list of possible areas which need improvement is not exhaustive. Its only purpose is to serve as an illustration of the many ways that may be available to assist our youth and other groups, particularly those living in the study region and other similar areas and in which our educators can play a direct or indirect role.

Being cognizant of and understanding the nature of the most pressing problems affecting not only the present and future labor force

of the study counties, but also of the nation as a whole is the only realistic way to apply the available solutions and to develop new ones to cope with them. In the years to come, this will be one of the most demanding responsibilities of our teachers and school personnel, particularly in those regions with the greatest problems as, for example, the study counties.